

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA2004/000610

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K14/54 A61K39/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, Sequence Search, BIOSIS, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 358 509 B1 (SEELIG GAIL F ET AL) 19 March 2002 (2002-03-19) SEQ ID NO:1 is 100% identical in 15 aa overlap to present SEQ ID NO:1 column 6, line 25 - column 7, line 13 column 5, line 65 - column 6, line 7	1-3, 8, 9, 12-14, 19-21, 36-39
Y	US 6 207 157 B1 (GU XIN-XING ET AL) 27 March 2001 (2001-03-27) claim 3 ----- -/-	10, 11, 22, 23

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

8 document member of the same patent family

Date of the actual completion of the international search

26 November 2004

Date of mailing of the international search report

18.03.05

Name and mailing address of the ISA

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 12-35, 41 and 42 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Invention 1: claims 1-3, 8-14, 19-26, 31-39 (all partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-3, 8-14, 19-26, 31-39 (all partially)

A reagent comprising a peptide fragment consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:1, a carrier protein and an adjuvant, and subject-matter relating thereto. An expression system comprising a nucleic acid molecule deducible from a peptide consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:1.

Inventions 2-6: claims 1-3, 8-14, 19-26, 31-39 (all partially)

Idem as subject 1 but limited to each of the peptides as in SEQ ID NOs:2-6. Invention 2 is limited to subject-matter relating to SEQ ID NO:2, invention 3 to SEQ ID NO:3, etc.

Invention 7: claims 1, 2, 4, 8-13, 15, 19-25, 27, 31-39 (all partially)

A reagent comprising a peptide fragment consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:7, a carrier protein and an adjuvant, and subject-matter relating thereto. An expression system comprising a nucleic acid molecule deducible from a peptide consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:7.

Inventions 8-13: claims 1, 2, 4, 8-13, 15, 19-25, 27, 31-39 (all partially)

Idem as subject 3 but limited to each of the peptides as in SEQ ID NOs:8-13.

Invention 14: claims 1, 2, 6, 8-13, 17, 19-25, 29, 31-39 (all partially)

A reagent comprising a peptide fragment consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:20, a carrier protein and an adjuvant, and subject-matter relating thereto. An expression system comprising a nucleic acid molecule deducible from a peptide consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:20.

Inventions 15-20: claims 1, 2, 6, 8-13, 17, 19-25, 29, 31-39 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Idem as subject 5 but limited to each of the peptides as in
SEQ ID NOs:20-25.

Invention 21: claims 1, 2, 5, 8-13, 16, 19-25, 28, 31-39 (all
partially)

A reagent comprising a peptide fragment consisting of 6 or
more consecutive residues of the sequence according to SEQ
ID NO:14, a carrier protein and an adjuvant, and
subject-matter relating thereto. An expression system
comprising a nucleic acid molecule deducible from a peptide
consisting of 6 or more consecutive residues of the sequence
according to SEQ ID NO:14.

Inventions 22-26: claims 1, 2, 5, 8-13, 16, 19-25, 28, 31-39 (all
partially)

Idem as subject 7 but limited to each of the peptides as in
SEQ ID NOs:15-19.

Invention 27: claims 1, 2, 8-13, 19-23, 24, 25 (all partially)

A reagent comprising an IL-25-derived peptide, a carrier
protein and an adjuvant, and subject-matter relating
thereto. A method of inducing an immune response in an
individual and a method of treating, ameliorating or
preventing asthma, comprising the administration of IL-25.

Invention 28: claims 1, 2, 12, 19-23, 24, 31-35, 36-39, 40-42 (all
partially)

A reagent comprising a peptide fragment consisting of 6 or
more consecutive residues of the sequence according to SEQ
ID NO:30, a carrier protein and an adjuvant, and
subject-matter relating thereto. An expression system
comprising a nucleic acid molecule deducible from a peptide
consisting of 6 or more consecutive residues of the sequence
according to SEQ ID NO:30.

Inventions 29-31: claims 1, 2, 12, 19-23, 24, 31-35, 36-39, 40-42
(all partially)

Idem as subject 10 but limited to each of the peptides as in
SEQ ID NOs:31-33.

Invention 32: claims 1, 2, 8-11 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A reagent comprising a TARC 3-derived peptide, a carrier protein and an adjuvant, and subject-matter relating thereto.

Invention 33: claims 1, 7-12, 18-24, 31-39 (all partially)

A reagent comprising a peptide fragment consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:26, a carrier protein and an adjuvant, and subject-matter relating thereto. An expression system comprising a nucleic acid molecule deducible from a peptide consisting of 6 or more consecutive residues of the sequence according to SEQ ID NO:26.

Inventions 34-36: claims 1, 7-12, 18-24, 31-39 (all partially)

Idem as subject 13 but limited to each of the peptides as in SEQ ID NOs:27-29.

Invention 37: claims 24, 25 (all partially)

A method of treating, ameliorating or preventing asthma comprising the administration of IL-2.

Invention 38: claims 24, 25 (all partially)

A method of treating, ameliorating or preventing asthma comprising the administration of IL-3.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CLARKE B E ET AL: "IMPROVED IMMUNOGENICITY OF A PEPTIDE EPITOPE AFTER FUSION TO HEPATITIS B CORE PROTEIN" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 330, 26 November 1987 (1987-11-26), pages 381-384, XP002035982 ISSN: 0028-0836 the whole document	10,11, 22,23
Y	HERTZ M ET AL: "Active vaccination against IL-5 bypasses immunological tolerance and ameliorates experimental asthma." JOURNAL OF IMMUNOLOGY (BALTIMORE, MD. : 1950) 1 OCT 2001, vol. 167, no. 7, 1 October 2001 (2001-10-01), pages 3792-3799, XP002307680 ISSN: 0022-1767 the whole document	24-26, 31-35
Y	GAVETT S H ET AL: "INTERLEUKIN 12 INHIBITS ANTIGEN-INDUCED AIRWAY HYPERRESPONSIVENESS, INFLAMMATION, AND TH2 CYTOKINE EXPRESSION IN MICE" JOURNAL OF EXPERIMENTAL MEDICINE, TOKYO, JP, vol. 182, no. 5, 1 November 1995 (1995-11-01), pages 1527-1536, XP000676698 ISSN: 0022-1007 the whole document	24-26, 31-35
A	WO 02/070711 A (CROWE JAMES SCOTT ; ASHMAN CLAIRE (GB); GLAXO GROUP LTD (GB); ELLIS JO) 12 September 2002 (2002-09-12) cited in the application page 4, lines 18,19 page 6, line 28 - page 7, line 5 claim 11	1-3, 8-14, 19-26, 31-39

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

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